



**BIODIVERSITY  
FOR FOOD AND  
NUTRITION**



## Biodiversity for Food and Nutrition Initiative



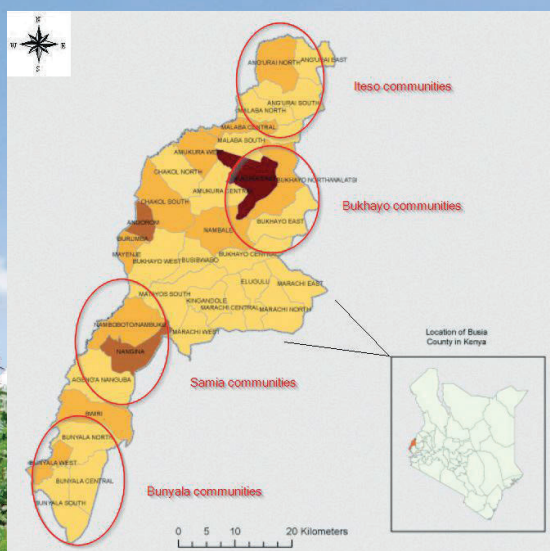
# KENYA

# KENYA, Busia County

Kenya is home to 7500 plant species, of which 475 are endemic. Despite this rich plant diversity, changes in eating habits and preferences and a lack of access to quality seed has left most Kenyans relying on a handful of food crops for their sustenance. Maize, beans, banana, rice and potatoes make up the bulk of the daily energy intake of a typical Kenyan household, yet many of the indigenous species present in the country have been shown to be nutritionally superior to these imported crops, both in terms of energy and micronutrient content. Furthermore, these species are better adapted to growing in the local environment and require fewer external inputs.

In Busia County, Western Kenya, 26.6% of children under five are stunted, 11% are underweight and 4% are thin due to malnutrition. Busia County has a variety of agro-ecological zones suitable for growing a diverse range of highly nutritious plants and crops that can be used as potential strategies to reduce this malnutrition. Unfortunately, a lack of organized market channels coupled with poor agronomic practices and poor attitudes towards production, consumption and marketing of these traditional plants create barriers to improving nutrition status, food security and overall well-being in local households.

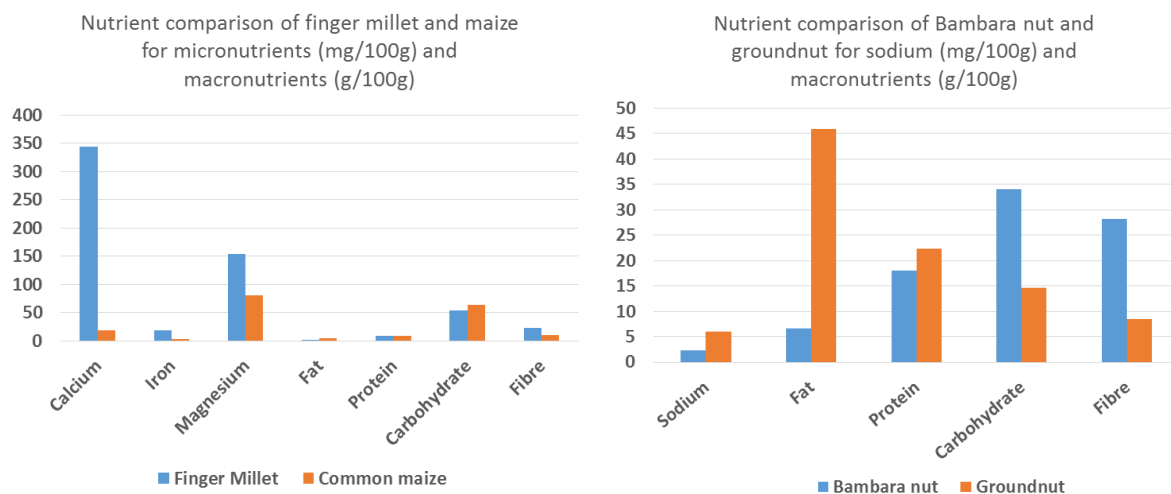
The Biodiversity for Food and Nutrition (BFN) Project team has documented a general decline in species diversity, soil fertility, yields, increased damage by pests and diseases and reduced rainfall in Busia County. The Project is working with Ministries of Education, Agriculture and Health, the Kenya Agricultural and Livestock Research Organisation (KALRO) and a local community-based organization; Sustainable Income Generating Investment (SINGI) to promote the conservation and sustainable use of locally important, nutritionally-relevant plant species to improve dietary diversity, food security and livelihoods.



# PROJECT HIGHLIGHTS

## Providing Evidence

Local landraces of finger millet were found to be higher in calcium and magnesium, and to contain on average 6 times more iron and twice as much fibre in comparison to commonly consumed maize varieties. Local landraces of Bambara nut were found to be lower in fat and sodium and higher in fibre than commonly consumed groundnut varieties, with almost double the potassium content (1333mg/100g). One variety of Bambara nut had an antioxidant activity of 20.2 mg sample/gdpph<sup>-1</sup>.



## Influencing Policies & Partnerships

The Busia Biodiversity Policy proposal for mainstreaming biodiversity conservation into nutrition and agricultural programmes has been finalized, and will be progressed by KALRO. If passed, Busia will be the first of 57 counties in Kenya to have such a policy. BFN Kenya became a member of the Nutrition Interagency Coordinating Committee (NICC) of the Scaling Up Nutrition (SUN) Movement in August 2012, and has since brought together stakeholders from government ministries, donors, UN agencies, civil society and business organisations, and made particular efforts to link nutrition to agriculture through the NICC.



*The First Lady of the Republic of Kenya, Ms. Margaret Kenyatta, visits the BFN Kenya stand at the NNS in Nairobi.*

In February 2015, BFN Kenya took part in the National Nutrition Symposium (NNS) and launch of the Government of Kenya-European Union-United Nations Children's Fund (GOK-EU-UNICEF) Maternal and Child Nutrition Programme. A focus of the programme is to reduce the impact of the recurrent food shortages and crises that have undermined the health and development of communities in Kenya's semi-arid and arid lands, using a multi-sectoral approach that focuses on prevention and treatment of malnutrition.

## Raising Awareness

A Training of Trainers (ToT) workshop was carried out in Busia County to demonstrate a number of organic agricultural technologies to 24 representatives from seven sub-counties. Training included methods for setting up and sustainably maintaining a nutritious home garden.



Seven schools, 7 community health extension units, and 7 farmer groups have established garden demonstration plots that include a range of diverse vegetables, and 7 traditional food fairs have been planned within the County to showcase and raise awareness about local Kenyan food and agricultural biodiversity.



A training manual of best practices has been developed for home gardening, health and sanitation, food processing and preservation, and nutrition and family meal planning.

During World Breast Feeding Week in August 2014, the BFN Kenya team informed mothers of the role of traditional foods such as cowpea, amaranth, arrow root and sorghum in increasing diet quality, and providing inexpensive and ready access to key micronutrients for balanced diets.



## Creating Markets

Surveys revealed that spider plant (*Cleome gynandra*), African nightshade (*Solanum scabrum*), and amaranth (*Amaranthus blitum*) are the three most important species sold and marketed in Busia.

Opportunities for value chain creation and sustainability, and strategies to resolve productivity and commercialization and boost competitiveness within the market are being explored.

# FUTURE ACTIONS

Updates to the national food composition tables and the national nutrition database are on-going, and will soon include new data for local mushrooms, wild fruits, edible insects, small livestock and traditional leafy vegetables.

The Kenya National Biodiversity Strategy and Action Plan (NBSAP) is currently being revised to include and highlight the important role agrobiodiversity plays in providing sustained year-round availability and access to nutritious foods.

Two grants from the McArthur Foundation and the Australian Centre for International Agricultural Research have been secured to develop value chains, and improve and build capacity for local farmers to sustainably and profitably supply local nutritious fruits and vegetables to schools for inclusion in feeding programmes.

From 2015-2017, BFN Kenya will facilitate a Farmer Business School model to help entrepreneurial farmers in Busia County build capacity in the sustainable production of nutrient crops, and ability to respond to demands from institutional markets such as local schools and clinics.

BFN Kenya will also carry out preliminary nutrition education interventions in three schools and communities in Busia County to increase appreciation and use of local nutritious biodiversity to improve dietary diversity.





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*The GEF 'Mainstreaming biodiversity for nutrition and health' initiative is led by Brazil, Kenya, Sri Lanka and Turkey and coordinated by Bioversity International, with implementation support from the United Nations Environment Programme (UNEP) and the Food and Agriculture Organization of the United Nations (FAO) and additional support from the CGIAR Research Program on Agriculture for Nutrition and Health.*

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Convention on  
Biological Diversity

**The BFN Project contributes to the implementation of the  
Convention on Biological Diversity's (CBD) Cross-Cutting Initiative  
on Biodiversity for Food and Nutrition**